MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2019/2020

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology)

05 March 2020
9.00 a.m. – 11 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **FOUR** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

a. What are the **TWO (2)** examples of computer output?

(2 marks)

b. Choose appropriate units of measurement for the following speeds.

hertz	bit per second	byte per nanosecond	byte per second

i. Memory access time _____
ii. Hard drive transfer rate _____
iii. Data speed for computer modems _____
iv. Clock speed of a CPU _____

(2 marks)

c. *Desktop*, *server* and *mobile* are three basic categories of operating systems that exist today. Discuss briefly how each category is different.

(3 marks)

d. Give **THREE (3)** reasons why computers need to be installed with operating system.

(3 marks)

QUESTION 2 [10 Marks]

a. The configuration of computers, devices, and media on a network is called the network architecture. Two examples of network architecture are client/server and peer-to-peer. Give **TWO (2)** features to describe client/server and **TWO (2)** features to describe peer-to-peer network.

(4 marks)

b. Sketch a simple peer-to-peer network connecting two PCs and a laptop. Use labels to indicate connecting media or any necessary network devices. Label one PC with IP address 192.168.1.1, the other PC with IP address 192.168.1.2 and the laptop as 192.168.1.3.

(4 marks)

c. A Database Management System (DBMS) provides several tools that allow users and programs to manage data in a database. One of DBMS features is query. What is query?

(2 marks)

Continued...

QUESTION 3 [10 Marks]

a. There are two types of programming languages; low-level and high-level. Describe the difference between low-level and high-level programming languages.

(2 marks)

b. What is sampling process in multimedia? Write the difference between streaming and non-streaming audio.

(3 marks)

c. A content developer needs to consider the suitable authoring software to develop a multimedia application. Describe multimedia authoring software.

(2 marks)

d. In protecting our computer system, the most secured authentication approach used is biometric authentication. What is biometric? Give **TWO (2)** examples of biometric devices that are often used to provide access to restricted locations.

(3 marks)

QUESTION 4 [10 Marks]

a. **Figure 1** shows how a computer communicates with common devices that are connected to it to carry out a task. Complete the diagram below by filling the 6 blanks.

Continued...

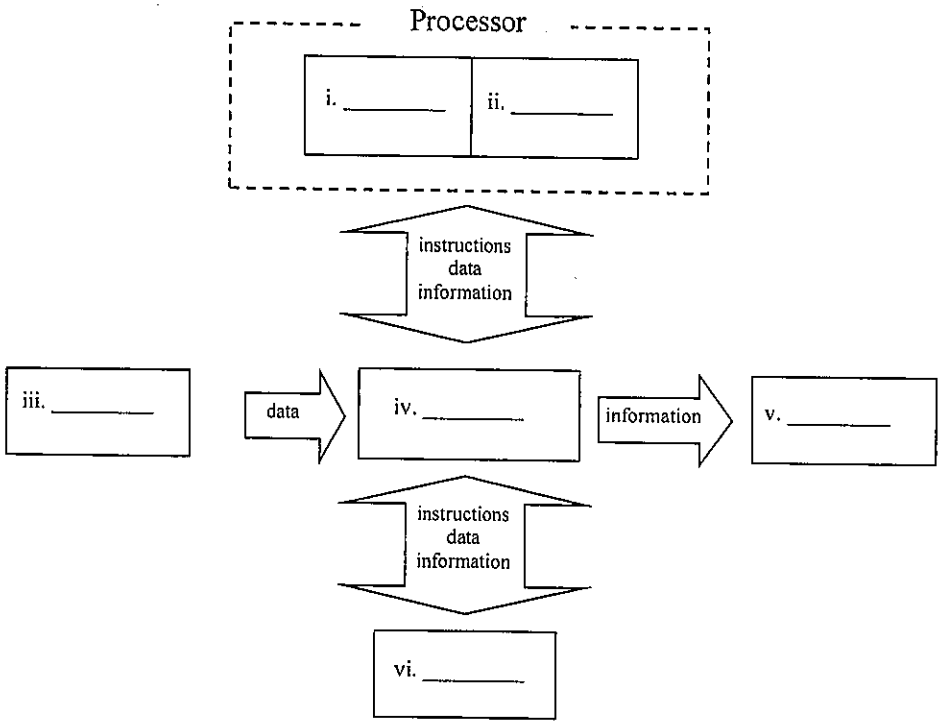

Figure 1

(3 marks)

b. Compare open-source software and proprietary software for desktop computers in terms of the licensing agreements and hardware requirements. Write your answers in a table format as shown in **Table 1**.

Table 1

Software	Licensing agreements	Hardware requirements
Open-source		
Proprietary		

(2 marks)

c. Identify and explain briefly the features of **TWO (2)** physical transmission media that may be used to connect devices in the network.

(2 marks)

d. Feasibility is a measure of how suitable the development of a system will be to the organization. Identify and explain briefly **TWO (2)** tests used to evaluate feasibility of a project.

(3 marks)

Continued...

QUESTION 5 [10 marks]

a. You are the new manager for a family-owned coffee shop. The coffee shop needs software in order to keep track of customer's orders and sales and to post about menu items, special promotions, or events. Database is one of the elements that need to be included into the software. List the hierarchy of data in a database.

(2 marks)

b. There are three common graphics formats used for website and web applications. Name **TWO (2)** of the formats and list **TWO (2)** characteristics for each format.

(5 marks)

c. Uploading and transmitting information to network has higher degree of security risk. List and explain briefly **TWO (2)** possible Internet and network attacks that could happen.

(3 marks)

End of Paper